

## Effluent Treatment Facility

The F and H Effluent Treatment Facility (ETF) treats low-level radioactive wastewater from the F and H area separations and waste management facilities. The ETF removes chemical and radioactive contaminants before releasing the water into Upper Three Runs Creek, a Savannah River Site (SRS) stream that flows to the Savannah River.

Construction and operation of the ETF were approved and permitted by the South Carolina Department of Health and Environmental Control (SCDHEC) and the Environmental Protection Agency (EPA).

### Construction

Construction began in January 1987, with a process startup date of October 1988. ETF was designed and constructed to allow SRS to meet all environmental regulations associated with the Resource Conservation and Recovery Act and the National Pollutant Discharge Elimination System under the Clean Water Act. The total project cost was \$55 million.

ETF is designed to process 100,000 to 250,000 gallons of low-level radioactive wastewater from the two separations areas daily. Maximum permitted facility capacity is 430,000 gallons per day. The ETF encompasses wastewater collection and treatment operations that were modified for radioactive use. It was designed to remove heavy metals, organic chemicals and corrosive chemicals, as well as cesium and other radiological contaminants from the wastewater.

### Discharge

ETF non-radiological effluents are discharged within limits of permits issued by SCDHEC. Because the Savannah River water eventually flows into municipal drinking water facilities, radiological effluents are governed by the federal Clean Water Act. This law establishes a safe standard for drinking water of 4 millirem (mrem) per year per person. Tritium releases from the ETF, when the site was operating at maximum production, were projected to result in an effective dose of less than 2.2 percent of the standard. In 2000, actual discharge from ETF resulted in an effective dose of 0.2 percent (two-tenths of 1 percent) of the standard.

All personnel operating ETF are certified by the South Carolina Environmental Certification Board. The operator in charge holds an "A" Physical/Chemical Wastewater Certificate, the highest level of certification granted by the board.